

USPTO Serial No. 10/608,443 (Docket No. VIDI-003)

In the Claims: (strikethrough parts deleted and underlined parts added)

Please delete Claims 21-26 without prejudice.

1. (Previously Canceled)
2. (Previously Canceled)
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25. (Canceled)

26. (Canceled)

Please add the following claims:

27. (New) A biomass gasification system designed for combusting biomass material containing silica such as straw, comprising:

a primary combustion chamber creating a primary combustion of biomass material to create a producer gas, wherein said biomass material contains silica;

an agitator within said primary combustion chamber to mix said biomass material during said primary combustion;

a secondary combustion chamber containing a secondary combustion of said producer gas, wherein said second combustion chamber is fluidly connected to said primary combustion chamber;

an oxygen mixer fluidly connected between said primary combustion chamber and said secondary combustion chamber to introduce additional oxygen into said producer gas emitted from said biomass material to increase a temperature of said second combustion to at least 2,000 degrees Fahrenheit; and

a silica collector positioned at a bottom of said secondary combustion chamber for collecting liquid silica, wherein silica collects on an inner wall of said secondary combustion chamber and drains into said silica collector.

28. (New) The biomass gasification system of Claim 27, wherein said silica collector is comprised of a container.

29. (New) The biomass gasification system of Claim 27, wherein said silica collector is comprised of a cart.

30. (New) The biomass gasification system of Claim 27, including a volume of liquid within said silica collector.

31. (New) A method of operating a biomass gasification system using biomass material containing silica, said method comprising the steps of:

feeding a volume of biomass containing silica into a primary combustion chamber;
combusting said biomass within said primary combustion chamber resulting in producer gas;

agitating said volume of biomass within said primary combustion chamber during said combusting said biomass;

adding oxygen to said producer gas;
combusting said producer gas within a secondary combustion chamber fluidly connected to said primary combustion chamber at a temperature of at least 2,000 degrees Fahrenheit; and
collecting a volume of silica at a bottom of said secondary combustion chamber.

32. (New) The method of operating a biomass gasification system of Claim 31, wherein said step of collecting a volume of silica is comprised of collecting said volume of silica within a silica collector positioned approximately at a bottom of said secondary combustion chamber.